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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,410	09/04/2001	Kunio Harada	HIRA.0017	1212

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EXAMINER

OLSEN, ALLAN W

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/944,410

Applicant(s)

HARADA ET AL.

Examiner

Allan W Olsen

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 9 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 9 requires the coating material to be a polyamide, whereas the specification only discloses using a polyimide.

Claim 10 recites, "wherein a length of the predetermined is in a range of 0.1 mm to 10 mm." The specification discloses this length range only in connection with a distance from the surface of the capillary tube and the reaction chamber (as claimed in claim 2). The length of the window is disclosed as being in the range of 1 to 20 mm (pages 2 and 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3, 6, 7, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,085,757 issued to Karger in view of US Patent 6,184,119 issued to Ku et al. (hereinafter, Ku).

Karger teaches that it is necessary to remove the polymeric coating from the surface of electrophoresis capillary tubes. Karger teaches the polymer may be removed by using a polymer burner (column 8, line 14). The polymer burner, which is disclosed in US 4,940,833, removes the polymer through an oxidation process that involves heating the polymer in an oxidizing environment (i.e., in the presence of oxygen).

Karger does not teach removing polymer by heating it in the presence of ozone.

Ku teaches removing an organic polymer from a surface by heating the polymer-coated surface to 250°C in the presence of ozone (column 9, lines 37-40).

It would have been obvious to one skilled in the art to remove the polymer coating from the surface of electrophoresis capillary tubes by heating the tubes in an ozone environment because, as taught by Ku, this is one of several recognized equivalent methods for achieving the oxidative removal of organic material.

It would have been obvious to one skilled in the art to use an ozone concentration below 10 % because as noted by applicant (page 8 of specification):

"Ozone has a risk of explosive decomposition and explodes at a concentration of around 10% at room temperature under atmospheric pressure. Therefore, it is necessary to provide the windows at a concentration of 10% or below."

Claims 4, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karger in view of Ku as applied above and further in view of US Patent 5,994,232 issued to Clampitt.

The Karger/Ku combination does not teach activation of ozone with UV radiation.

Clampitt teaches removing organic polymer with an oxidation process that includes heating ozone and UV irradiation (column 6, lines 6-11).

It would have been obvious to one skilled in the art to apply UV radiation because Clampitt teaches that ozone can be activated by heating and/or exposing the ozone to UV radiation. Therefore, these are art recognized equivalent means of activating ozone for removing organic polymer.

Allowable Subject Matter

Claim 2 is allowed.

Upon further consideration, the indicated allowability of claims 3 and 4 is withdrawn.

Conclusion

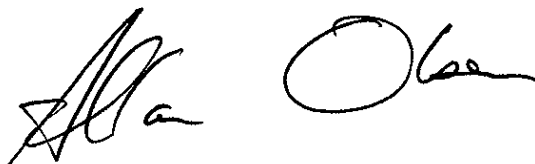
The prior art made of record on the attached PTO form 892 is not relied upon but is considered pertinent to applicant's disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Olsen whose telephone number is 571-272-1441. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Mills, can be reached on 571-272-1439.

The fax number for TC1700 is 703-872-9306 (non-after finals and after-final). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1300.

Allan Olsen, Ph.D.
January 8, 2004

The image shows two handwritten signatures. The first signature on the left is a stylized, cursive 'A' followed by 'Olsen'. The second signature on the right is a large, circular 'O' followed by 'Olsen'.